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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 September 2001</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-47</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-24 and 26-47</u> is/are rejected.
7)☒ Claim(s) <u>25</u> is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>26 September 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
        1.☐ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
            application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date <u>41025</u>.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1.   The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification, such as:

-    "Java" is misspelled (page 6 line 13).

-    "voice" is misspelled (page 11 line 19).

-    "phoneme" is misspelled (page 29 line 18).

5.   The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

        The following title is suggested:

        "Dynamic Control of Speaker-Dependent and/or Application-Dependent

        Voice Command Platforms"

Claim Objections

2.   Claims 6 are objected to because of the following informalities:

-    In claims 6 and 18, "converting" is misspelled (lines 13 and 10).

- In claims 20 and 40, "specification" is misspelled (lines 5 and 17).

- Claims 21 and 42 contain the negative word "*not*" which suggests that an element is being subtracted. This is improper, and should be corrected by redrafting the claims.

- In claim 29, "receives" or "retrieves" is misspelled (line 12).

- In claim 35, colon should be semicolon (line 2) and "applying" is misspelled (line 10).

- The 1st line of claim 44 should end with a colon.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

VoiceAssist

4.   Claims 1-5, 24 and 26-29 are rejected under 35 U.S.C. 102(b) as being anticipated by VoiceAssist ("Voice Assist User's Guide", Creative Labs © 1993).

5.   Regarding claim 1, VoiceAssist long ago packaged its voice recognition software with its sound card interfaces, and such combinations were widely put into place to assist individuals with disabilities by operating such programs as Lighthouse® by Tandy

and Plato™ from Home Automation (references included) in addition to the conventional word processing and spreadsheet applications. With this, <u>VoiceAssist</u> read on every feature of the claim for *a voice command platform* as follows:

- <u>VoiceAssist</u> read on the feature of *a user communication interface* (*audio card* in the 3rd line of System Requirements on page 1-1);

- <u>VoiceAssist</u> read on the feature of *a processor* (with the processors discussed in the last paragraph of System Requirements on page 1-1);

- <u>VoiceAssist</u> read on the feature of *an application-processing module executable by the processor to process voice command applications* (in this case, *Windows 3.1* in the 9th line of System Requirements on page 1-1);

- <u>VoiceAssist</u> read on the feature of *the voice command applications defining user-prompts, allowed grammars, and application logic;*

- <u>VoiceAssist</u> read on the feature of *a voice-processing module executable by the processor to recognize the allowed grammars in speech signals received from a user via the user communication interface* (see "Training <u>VoiceAssist</u>", Chapter 4 pages 4-1 to 4-8), *and to convert the user-prompts into speech signals for transmission to the user via the user communication interface, the voice-processing module having a plurality of selectable modes of operation* (see "Training the Generic Set", 1st paragraph on page 4-3); *and*

- <u>VoiceAssist</u> read on the feature of *selection-logic executable by the processor in response to a specification received during a voice command session with the user* (see "Working with User & Application Files" and "Setting up Custom Applications",

pages 5-1 to 6-1), *to cause the voice-processing module to operate according to a*

mode of operation that corresponds with the specification (see last line of 1st

paragraph in "Command Sets" pages 2-1).

6.   Regarding claim 2, the claim is set forth with the same limitations of claim 1.

VoiceAssist read on the feature where *the specification is received from the user during*

the voice command session (1st sentence of next-to-last paragraph, page 3-1).

7.   Regarding claim 3, the claim is set forth with the same limitations of claim 1.

VoiceAssist read on the feature where *the specification is received from a voice*

command application being processed during the voice command session (4th line of

"Automatic Training" on page 2-2).

8.   Regarding claim 4, the claim is set forth with the same limitations of claim 1.

VoiceAssist read on the feature where *the specification is received from a stored profile*

record for the user (see *Managing Applications in User Files* on page 5-2 & figure 5-3).

9.   Regarding claim 5, the claim is set forth with the same limitations of claim 4.

VoiceAssist read on the feature where *the specification is received at initiation of the*

voice command session with the user (where the *included apps* of figure 4-2 are

activated as "generic commands" from any point in the user session – see "Training the

Generic Set" at the top of page 4-3). Note that the last line of the 1st paragraph of this

reference should be read "commands are actually the name of any applications, as the

commands are not hard-coded but dynamically taken as both activating command and

to name the command set when the application is loaded".

10.   Regarding claim 24, the claim is set forth with the same limitations of claim 1.

-    VoiceAssist read on the feature where *the voice-processing module comprises*

     (i) a core phoneme dictionary (see page 2-2 lines 17-18 where *phonemes* are

described) *that the processor uses to recognize phonemes in incoming speech signals*

(with the *generic* command set being *core* – see the instructions in the last paragraph

on page *vii* with 1st paragraph page 4-3) *and*

     (ii) at least one secondary phoneme dictionary that the processor uses to

recognize phonemes in incoming speech signals (with the *application commands*

specific to each application – see the instructions in the 2nd paragraph of page *viii*)

-    VoiceAssist read on the feature where *the specification comprises an indication of*

     which secondary phoneme dictionary to use when the processor is processing a

     given voice command application (shown in figure 5-1); *and*

-    VoiceAssist read on the feature where *the selection-logic is executable by the*

     processor in response to the specification to cause the processor to use a given

     secondary phoneme dictionary to recognize phonemes in incoming speech signals

     when the processor is processing the given voice command application (activating

     according to instructions provided in the 2nd-from-last paragraph page 3-1, noting

that the phoneme dictionary file name for each application is taken directly from and named for the application).

11.   Regarding claim 26, the claim is set forth with the same limitations of claim 24. VoiceAssist read on the feature where, *when the processor uses a given secondary phoneme dictionary to recognize phonemes in incoming speech signals, the processor uses the given secondary phoneme dictionary in conjunction with the core phoneme dictionary* (where the *generic set* is recognized when any of the secondary *application sets* is active – see 2nd sentence in page 4-3).

12.   Regarding claim 27, the claim is set forth with the same limitations of claim 26. VoiceAssist read on the feature where *the given secondary phoneme dictionary defines additions to the core phoneme dictionary* as applications are appended to the generic command dictionary (2nd paragraph in page 2-2).

13.   Regarding claim 28, the claim is set forth with the same limitations of claim 24. VoiceAssist read on the feature where *the specification is received from a stored table that correlates voice command applications with secondary phoneme dictionaries* (last paragraph page 5-1).

14.   Regarding claim 29, the claim is set forth with the same limitations of claim 28.

VoiceAssist read on the feature where *the voice command platform receives the given*

secondary phoneme dictionary from a source selected from the group consisting of

   (i) a provider of the given voice command application, in advance of the voice

command session (shown with the *user file list* in figure 5-1)*, and*

   (ii) the voice command application, when the voice command application is

loaded into the platform (shown as *applications in current user file* in figure 5-1)*.*

Claim Rejections - 35 USC § 103

15.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

16.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

VoiceAssist & TextAssist

17.   Claims 6-12, 19-20, 31-38 and 44-47 are rejected under 35 U.S.C. 103(a) as

being unpatentable over <u>VoiceAssist</u> in view of <u>TextAssist</u> ("Voice Assist User's Guide",

Creative Labs © 1993).

18.   Regarding claim 6, the claim is set forth with the same limitations of claim 1.

Historically, speech products were narrowly separated by function, so recognizers such

as <u>VoiceAssist</u> did not include a voice synthesizer. The recognition and synthesizers

typically were delivered together. When the need arose, the recognizers were coupled

to synthetic speech generators both to provide audibly feedback to individuals with

vision disabilities and provide speech capability to individuals with vocal disabilities by

generating words on typing or pressing special buttons.

These products were provided at no cost as incentive to purchase computers and

sound cards, and such combinations have been installed and distributed as assistive

technology for the past two decades. Although packaged, distributed and advertised

together by the same entity, they were never integrated into a single package and so

the references remain distinct. Because the user community consistently combined the

products to provide complete voice support, the references together read on the claim

as follows:

-     <u>TextAssist</u> read on the feature where *the user-prompts comprise text prompts* (with

   drag-and-drop – see 2nd paragraph page 1-1 – being only one type of many prompts

   addressed by the reference);

- TextAssist read on the feature where *the voice-processing module comprises a plurality of text-to-speech engines for converting the text prompts into speech signals* (1st paragraph page 2-4);

- TextAssist read on the feature where *the specification indicates a given text-to-speech engine to use for converting text prompts into speech signals* (1st line page 2-11); and

- TextAssist read on the feature where *the mode of operation that corresponds with the specification comprises applying the given text-to-speech engine when converting text prompts into speech signals* (last paragraph page 2-10).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of TextAssist to the device/method of VoiceAssist to allow operation of applications by individuals with vision disability.

19.   Regarding claim 7, the claim is set forth with the same limitations of claim 1. VoiceAssist did not include a voice synthesizer.

- TextAssist read on the feature where *the voice-processing module comprises a plurality of text-to-speech engines for converting user-prompts into speech signals, including a 1st text-to-speech engine and a 2nd text-to-speech engine* (initially, *nine predefined* but can be altered/added to with *advanced functions* and *dictionaries* to make each "voice" a distinct engine – see 1st paragraph page 2-4, figure 2-4 & figure 2-10);

- <u>TextAssist</u> read on the features whereby, *in a 1st mode of operation of the voice-processing module, the 1st text-to-speech engine is active, so that, when the processor executes the voice-processing module to convert user-prompts into speech signals, the processor applies the 1st text-to-speech engine;* and the feature whereby, *in a 2nd mode of operation of the voice-processing module, the 2nd text-to-speech engine is active, so that, when the processor executes the voice translation module to convert user-prompts into speech signals, the processor applies the 2nd text-to-speech engine* (1st paragraph of section *"Learning to Make Application Associations", page 2-10); and*

- <u>TextAssist</u> read on the feature where *the selection-logic is executable by the processor in response to the specification received during the voice command session,* (2nd paragraph of *"Learning to Make Application Associations", page 2-10).*

It would have been obvious *to switch from the 1st mode of operation to the 2nd mode of operation* since only one voice may be active at a time as it would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of <u>TextAssist</u> to the device/method of <u>VoiceAssist</u> and *to switch from the 1st mode of operation to the 2nd mode of operation* to provide distinguishing and necessary characteristics required by the application – for example, the *mathematics* dictionary of a previously-loaded *spreadsheet* would provide limited utility to a newly-begun *word processor.*

20.   Regarding claim 8, the claim is set forth with the same limitations of claim 7.

VoiceAssist applications provide user-controlled *defaults* for voice processing see

"Managing Applications in User Files, page 5-2 to 5-3) and TextAssist can be and has

been defined as an application. In this mode, TextAssist read on the feature where *the*

1st mode of operation is a default mode of operation of the voice-processing module (1st

line of last paragraph on page 2-10). It would have been obvious to a person of

ordinary skill in the art of speech signal processing at the time of the invention to apply

the method/teachings of TextAssist to the device/method of VoiceAssist to provide both

speech recognition and synthesis simultaneously, as in some interactive games and for

using voice control to operate a telephone in a Personal Computer.

21.   Regarding claim 9, the claim is set forth with the same limitations of claim 7.

VoiceAssist read on the feature where *the specification is received from the user during*

the voice command session (3rd sentence of 2nd paragraph of page 6-1).

22.   Regarding claim 10, the claim is set forth with the same limitations of claim 7.

VoiceAssist read on the feature where *the specification is received from a voice*

command application being executed during the voice command session (last sentence

of 2nd paragraph from end page 3-1).

23.   Regarding claim 11, the claim is set forth with the same limitations of claim 7.

VoiceAssist read on the feature where *the specification is received from a stored profile*

record for the user (last two paragraphs page 5-2).

24.   Regarding claim 12, the claim is set forth with the same limitations of claim 11.

VoiceAssist read on the feature where *the specification is received at initiation of the*

voice command session with the user (both *from the user*, 3rd sentence of 2nd paragraph

of page 6-1 and *from the application* last sentence of 2nd paragraph from end page 3-1).

25.   Regarding claim 19, the claim is set forth with the same limitations of claim 1.

- VoiceAssist does not generate voice. TextAssist read on the features where, *in a 1st*

    mode of operation, the voice-processing is executable to convert the user prompts

    into speech signals representing a 1st voice persona; and where, in a 2nd mode of

    operation, the voice-processing is executable to convert the user prompts speech

    signals representing a 2nd voice persona (figure 2-6);

- TextAssist read on the feature where *the selection-logic is executable by the*

    processor in response to a 1st specification received during a 1st voice command

    session with a 1st user, to cause the voice-processing module to operate according

    to the 1st mode of operation; and on the feature where *the selection-logic is*

    executable by the processor in response to a 2nd specification received during a 2nd

    voice command session with a 2nd user, to cause the voice-processing module to

    operate according to the 2nd mode of operation (2nd paragraph from end page 2-11).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of TextAssist to the device/method of VoiceAssist because each application uses text for different purposes, as writing and warning, and some voices will be considered more suited to *reading* than to *warning*.

26.   Regarding claim 20, the claim is set forth with the same limitations of claim 19. While VoiceAssist does not maintain speech profiles, the features of the claim are the same as that found for claim 4 regarding management of multiple profiles.

TextAssist read on the features where *the 1st specification is received from a stored profile record for the 1st user, and the 2nd specification is received from a stored profile record for the 2nd user* (see last paragraphs on both page 2-10 and page 2-11). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of TextAssist to the device/method of VoiceAssist to permit one voice to serve similar applications.

27.   Regarding claim 31, VoiceAssist read on the feature *of dynamically switching between modes of operation of a voice-processing module in a voice command platform* (2nd paragraph from end page 3-1), *the voice-processing module being executable by a processor to recognize allowed grammars in speech signals received from a user via a user communication interface* (1st paragraph page 4-2).

VoiceAssist read on the feature *of receiving, during a voice command session with the user, a specification indicative of a mode of operation of the voice-processing module* (by vocally specifying the application to be operated, see the 2nd paragraph at the end of page 2-1);

VoiceAssist read on the feature *of response to the specification, switching from a 1st mode of operation of the voice processing module to a 2nd mode of operation of the voice-processing module* (when one application is vocally specified by generic command while another is running, see the last 2 lines of the 2nd paragraph at the end of page 2-1);

VoiceAssist provides for automatic command confirmation (see figure 4-6) but does not synthesize speech. By vocalizing text as it appears, TextAssist vocalizes these prompts – as well as other prompts appearing from applications – reading on the feature *to convert user-prompts defined by voice command applications into speech signals for transmission to a user via the user communication interface* (3rd paragraph from end page *vii*). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of TextAssist to the device/method of VoiceAssist so as to verbally request and confirm recognition of a command or to announce the status of a remote device.

28.   Regarding claims 32, 33 and 34, the claims are set forth with the same limitations as claim 31. The features of the claims are the same as those found in claims 2, 3 and 4, respectively, and the claims are rejected for the same reasons.

29.   Regarding claim 35, the claim is set forth with the same limitations as claim 31.

VoiceAssist read on the feature that *the user-prompts comprise text prompts* (for

example, the automatic "confirmation" option figure 4-6) but does not itself *synthesize*

speech.

-    TextAssist read on the feature of *a plurality of text-to-speech engines for converting*

the text prompts into speech signals, in the 1st mode of operation of the voice-

processing module, the processor applies a 1st text-to-speech engine to convert text

prompts into speech signals (1st paragraph page 2-4);

-    TextAssist reads on the feature where, *in the 2nd mode of operation of the voice-*

processing module, the processor applies a 2nd text-to-speech engine to convert text

prompts into speech signals (last paragraph page 2-10).

-    TextAssist reads on the feature where *switching from the 1st mode of operation of*

the voice-processing module to the 2nd mode of operation of the voice-processing

module comprises causing the processor (i) to stop applying the 1st text-to-speech

engine to convert text prompts into speech signals and (ii) to start applying the 2nd

text-to-speech engine to convert text prompts into speech signals (being *user-*

dependant, 1st line page 3-1 and employing a single sound interface prevents

concurrent voicing without mixing);

30.   Regarding claims 36, 37 and 38, the claims are set forth with the same limitations as claim 35. The features of the claims are the same as those found in claims 2, 3 and 4, respectively, and the claims are rejected for the same reasons.

31.   Regarding claim 44, the claim is set forth with the same limitations as claim 31.

- VoiceAssist read on the features where (i) a core phoneme dictionary *(see page 2-2 lines 17-18 where phonemes are described) that the processor uses to recognize phonemes in incoming speech signals (with the generic command set being core – see the instructions in the last paragraph on page vii with 1st paragraph page 4-3)* and that

    (ii) at least one secondary phoneme dictionary that the processor uses to recognize phonemes in incoming speech signals (with the *application commands* specific to each application – see the instructions in the 2nd paragraph of page *viii*)

- VoiceAssist read on the feature where *the specification comprises an indication of which secondary phoneme dictionary to use when the processor is processing a given voice command application* (shown in figure 5-1)*; and*

- VoiceAssist read on the feature where, *in the 1st mode of operation, the processor uses a 1st secondary phoneme dictionary to recognize phonemes in incoming speech signals; and in the 2nd mode of operation, the processor uses a 2nd secondary phoneme dictionary to recognize phonemes in incoming speech signals* (by disclosing in the instructions in the last paragraph page 2-1 that the current

application is loaded into memory as the user moves *from application to application* – see 4th line from end page 2-1).

32.   Regarding claims 45, 46 and 47; the claims are set forth with the same limitations as claim 44. The features of the claims are the same as those found in claims 26, 28 and 29, respectively, and the claims are rejected for the same reasons.

VoiceAssist, TextAssist & Ostrowski

33.   Claims 13-14, 16-18 and 39-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>VoiceAssist</u> in view of <u>TextAssist</u> and further in view of <u>Ostrowski</u> (U.S. Patent 4,215,240 A).

34.   Regarding claim 13, the claim is set forth with the same limitations of claim 1. <u>VoiceAssist</u> did not include a voice synthesizer. <u>TextAssist</u> includes *Texto'LE* to create messages that can be called up as required to provide user-generated text messages as required anywhere during the session. This feature reads on the features of this claim as follows:

- <u>TextAssist</u> read on the feature where *the user-prompts comprise designations of prerecorded speech signals representing voice prompts to retrieve and transmit to the user* (see *Creating a Talking Message,* pages 4-2);

- <u>TextAssist</u> *Texto'LE* read on the feature where *the voice-processing module is executable to convert a user prompt defined by a voice command application into a*

speech signal by retrieving from a voice prompt store a given voice prompt corresponding to the user prompt (2nd paragraph of page 4-1);

- TextAssist *Texto'LE* read on the feature where *the voice-processing module comprises a plurality of voice prompt stores, each voice prompt store comprising a respective version of the given voice prompt* (figure 4-2);

    TextAssist *Texto'LE* read on the feature where *the specification indicates a given voice prompt store to use for converting prompts into speech signals* (see Inserting the Message into a Write Document, page 4-4) but inserts the physical message. Consequently, the prior art of reference do not read on *the mode of operation retrieving the voice prompt.* The invention of Ostrowski for a *portable voice system for the verbally handicapped* reads on the feature where *the mode of operation that corresponds with the specification comprises retrieving the given voice prompt from the given voice prompt store* (claim 13 lines 32-36).

    It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method and/or teachings of TextAssist to the device/method of VoiceAssist to give voice to prompts, reminders or instructions, and it further would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method and/or teachings of Ostrowski to the device/method of VoiceAssist and/or TextAssist so that applications would not have to be recompiled every time the messages are changed.

35.   Regarding claim 14, the claim is set forth with the same limitations of claim 13.

While both VoiceAssist and TextAssist do specify words during the setup/training

process, neither of them operates dynamically during the *voice command session.*

Ostrowski reads on the feature where *the specification is received from the user during*

the voice command session. (by *entering words* in claim 13 line 30).

It would have been obvious to a person of ordinary skill in the art of speech

signal processing at the time of the invention to apply the method and/or teachings of

Ostrowski to the device/method of VoiceAssist and/or TextAssist to conserve space by

not including the text of errors because errors are in the minority and because they are

seldom displayed more than once as users learn to avoid problems.

36.   Regarding claims 16 and 18, the claims are set forth with the same limitations of

claim 13. The features of the claims are the same as those found in claims 4 and 6,

respectively, and the claims are rejected for the same reasons.

37.   Regarding claim 17, the claim is set forth with the same limitations of claim 16.

The feature of the claim is the same as those found in claim 5 and the claim is rejected

for the same reason.

38.   Regarding claim 39, the claim is set forth with the same limitations of claim 1.

VoiceAssist did not include a voice synthesizer.

- <u>TextAssist</u> read on the feature where *the user-prompts comprise designations of prerecorded speech signals representing voice prompts to retrieve and transmit to the user* (see *Creating a Talking Message*, pages 4-2);

- <u>TextAssist</u> *Texto'LE* read on the feature where *the voice-processing module is executable to convert a user prompt defined by a voice command application into a speech signal by retrieving from a voice prompt store a given voice prompt corresponding to the user prompt* (2nd paragraph of page 4-1);

- <u>TextAssist</u> *Texto'LE* read on the feature where *the voice-processing module comprises a plurality of voice prompt stores, each voice prompt store comprising a respective version of the given voice prompt* (figure 4-2);

- <u>TextAssist</u> *Texto'LE* read on the feature where *the specification indicates a given voice prompt store to use for converting prompts into speech signals* (see Inserting the Message into a Write Document, page 4-4) but inserts the physical message so does not read on *the mode of operation retrieving the voice prompt.*

<u>Ostrowski</u> reads on the feature where *in the 1st mode of operation, the voice-processing module is executable to retrieve the given voice prompt from a 1st prompt store and in the 2nd mode of operation, the voice-processing module is executable to retrieve the given voice prompt from a 2nd prompt store* (claim 13 lines 32-36).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method and/or teachings of <u>TextAssist</u> to the device/method of <u>VoiceAssist</u> to give voice to prompts, reminders or instructions, and it further would have been obvious to a person of ordinary skill in the

art of speech signal processing at the time of the invention to apply the method and/or

teachings of <u>Ostrowski</u> to the device/method of <u>VoiceAssist</u> and/or <u>TextAssist</u> so that

applications would not have to be recompiled every time the messages are changed.

39.   Regarding claims 40, 41 and 42, the claims are set forth with the same limitations

as claim 39. The features of the claims are the same as those found in claims 2, 3 and

4, respectively, and the claims are rejected for the same reasons.

VoiceAssist, TextAssist, Ostrowski & Worthington *et al*

40.   Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over

<u>VoiceAssist</u> in view of <u>TextAssist</u> and further in view of <u>Ostrowski</u> and further in view of

<u>Worthington *et al*</u> (U.S. Patent 5,365,050 A).

41.   Regarding claim 15, the claim is set forth with the same limitations of claim 13.

While <u>TextAssist</u> can be turned on to vocalize all prompts, this is done *without*

specification from an application so neither <u>VoiceAssist</u> nor <u>TextAssist</u> nor <u>Ostrowski</u>

mention *specification received during voice command session.* The invention of

<u>Worthington *et al*</u> for a *portable data collection terminal with voice prompt and recording*

read on the feature where *the specification is received from a voice command*

application being executed during the voice command session (as shown by the

example of voice being triggered by event in column 2 line 46).

VoiceAssist & Hashimoto

42.   Claims 21-23 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable

over VoiceAssist in view of Hashimoto (Japan Patent 64-071254).

43.   Regarding claims 21 and 43; the claims are set forth with the same limitations of

claims 1 and 31, respectively. VoiceAssist selects the generic grammar on activation

and specific grammar on loading applications, neither selection depending on

recognition of speech. The invention of Hashimoto for an *automatic answering*

telephone system detects language other than Japanese and gives the result of

recognizing a foreign language to a personal computer, which extracts the reply

message of the foreign language from a hard disk, and so reads on the claim as follows:

-   Hashimoto reads on the feature where *the voice-processing module includes a*

    speech recognition engine executable by the processor to recognize the allowed

    grammars in the speech signals received from a user (14 in drawing 1);

-   Hashimoto reads on the feature where, *in a 1st mode of operation of the voice-*

    processing module, the speech recognition engine actively monitors incoming

    speech signals and provides output indicative of allowed grammars recognized in

    the incoming speech signals (6th line of ¶(57), page 1);

-   VoiceAssist reads on the feature where, *in a 2nd mode of operation of the voice-*

    processing module, the speech recognition engine does not actively monitor speech

    signals and provide output indicative of allowed grammars recognized in the

    incoming speech signals (being *user-dependant,* 1st line page 3-1);

- <u>Hashimoto</u> reads on the feature where, *the specification is received from the user during the voice command session with the user* (9th line of ¶(57), page 1; and

- <u>VoiceAssist</u> reads on the feature where *the selection-logic is executable by the processor in response to the specification to switch the voice-processing module from the 1st mode of operation to the 2nd mode of operation* (1st 4 lines page 5-1).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method and/or teachings of <u>Hashimoto</u> to the device/method of <u>VoiceAssist</u> so that preliminary conversation before selecting a language manually would not be lost, and to further apply the method and/or teachings of <u>VoiceAssist</u> to provide a manual method of setting the grammar in case the automatically set grammar was incorrect.

44.   Regarding claim 22, the claim is set forth with the same limitations of claim 21. <u>VoiceAssist</u> read on the feature where *the specification comprises a mute-command provided by the user* (with "*go to sleep*" command – see the last paragraph in page 3-1).

45.   Regarding claim 23, the claim is set forth with the same limitations of claim 22. <u>VoiceAssist</u> read on the feature where *specification comprises a speech signal representing at least the word "Mute"* (by redefining the "go to sleep" command to recognize the word "mute" – see the 2nd paragraph page 4-5).   It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to rename the lengthy command to the shorter word "mute" in order to

accommodate the needs of a person with a speaking disability that makes pronouncing

the longer command, difficult.

VoiceAssist & Bareis *et al*

46.   Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over

VoiceAssist in view of Bareis *et al* (U.S. Patent 5,297,183 A).

47.   Regarding claim 30, the claim is set forth with the same limitations of claim 1.

VoiceAssist does not mention *wireless* communications. The invention of Bareis *et al* of

a speech recognition system for electronic switches in a cellular telephone or personal

communication network reads on the feature where *speech signals are communicated*

between the user and the user communication interface via a telecommunications

network comprising a wireless communications link.

It would have been obvious to a person of ordinary skill in the art of speech

signal processing at the time of the invention to apply the method/teachings of Bareis *et*

al to the device/method of VoiceAssist to make vehicular driving safer by eliminating the

visual and manual distraction of turning on, tuning and operating devices.

Allowable Subject Matter

48.   Claim 25 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

49.   The following is a statement of reasons for the indication of allowable subject matter:

- The present invention is directed to *selecting specific operating supports of either speaker or applications – or both – for speech-controlled applications.*

- Claim 25 identifies the uniquely distinct feature "*when the processor uses a given secondary phoneme dictionary to recognize phonemes in incoming speech signals, the processor uses only the given secondary phoneme dictionary and not the core phoneme dictionary.*"

- Speaker-dependant or application-dependant prior art conventionally employ only one voice resource – singly or as a result of combining dictionaries –so lack the primary/secondary structure of the claim, the closest prior art of VoiceAssist employs a primary phoneme dictionary collection for common *core* commands and a series of secondary phoneme dictionaries that are *application*-specific. Other examples employing separate dictionaries either are similarly unable to operate independently, as the translator of Takatori *et al*, but must use one for input recognition and the other for output synthesis. Examples of prior art that do have independent operation

– as <u>TextAssist</u> and <u>Bennett</u> *et al* – do not work with incoming speech.

Consequently, the prior art of record fail to anticipate or render the above underlined

limitations obvious.

Conclusion

50.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

-   <u>Nishikawa</u> (Japan Patent 2001-016553) a voice synthesizing means 10 extracts the
    phonemes from phoneme dictionaries 8, 9 to synthesize the voice.

-   <u>Bennett</u> *et al* (U.S. Patent 5,815,639 A) computer-aided transcription system using
    pronounceable substitute text with a common cross-reference library.

-   <u>Hetherington</u> *et al* (U.S. Patent 6,334,101 B1) for dynamic delivery of human
    language translations during software operation.

-   <u>Osder</u> *et al* (U.S. Patent 6,058,166 A) multi-lingual prompt management in a voice
    messaging system with support for speech recognition provides option for manually
    switching from recognized languages in case of misidentification.

-   <u>Takatori</u> *et al* (Japan Patent 2002-118659) translation telephone device performs
    setting of language to use, automatically setting the translation service.

-   <u>Suzuki</u> *et al* (U.S. Patent 5,257,187 A) translation machine system automatically and
    selectively setting an input mode to correspond to input language.

-   <u>Kolettis</u> *et al* (U.S. Patent 3,990,050 A) computer controlled automatic response.

-   <u>Hohl</u> *et al* (U.S. Patent 4,523,055 A) voice/text storage and retrieval system.

- <u>Karnes</u> <u>et al</u> ("25 top Windows tips", COMPUTE! issue 151 / April 1993 / page 42)
  included to provide background support with description of operation of Windows 3.1
  Recorder, used to respond with voice control software for complex operations.

- <u>Sherin</u> <u>et al</u> ("Plato TW™ for Windows®", Home Automation Systems, Inc., News
  Release © 1995) controlling appliances with speech using Plato™ and X-10® PLC
  (powerline control/communication) devices with <u>VoiceAssist</u> or other recognition.

- <u>Recorder</u> ("Microsoft Automatically Running Recorder Macros, Command Line
  Parameters", Microsoft Knowledge Base, previously published under Q72439 ©
  1991) discusses the Recorder application included with Windows 3.0 through 3.11 to
  load a file when started and automatically run a macro that is defined in the file.

- <u>DynaVox</u> (Dynavox Systems LLC, product description ©1998) was used with
  LightHouse™ for a Cerebral Palsy patient with diminished voice and motor skills to
  operate appliances by pressing buttons that spoke words to operate PLC devices.

- <u>X10</u> (X10 USA Inc, product description © 1996) enables remote control of plug-in
  appliances using signals generated by computer, in conjunction with voice, eliminate
  need for line-of-sight and avoids RC and IR interference with medical equipment.

51.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Daniel A. Nolan whose telephone number is (703)305-
1368. The examiner can normally be reached on Mon, Tue, Thu & Fri, from 7 AM to 5
PM. If attempts to contact the examiner by telephone are unsuccessful, the examiner's
supervisor, Richemond Dorvil, can be reached at (703)305-9645.

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The fax phone number for the organization where this application or proceeding

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Formal response to this action may be faxed according to the above instructions,

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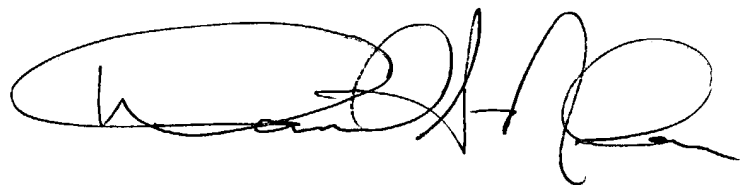   Alexandria, VA 22313-1450

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Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to Technology Center 2600 Customer Service Office at

telephone number (703) 306-0377.

                                    Daniel A. Nolan
                                    Examiner
                                    Art Unit 2654

DAN/d
November 1, 2004

DANIEL NOLAN
PATENT EXAMINER